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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/996,534	11/28/2001	John R. Arnold	DMX-23	2815

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EXAMINER

BERMAN, SUSAN W

ART UNIT PAPER NUMBER

1711

DATE MAILED: 02/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/996,534

Applicant(s)

ARNOLD, JOHN R.

Examiner

Susan W Berman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 April 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Specification

The disclosure is objected to because of the following informalities:

The sentence on page 1 setting forth a cross reference to a related application does not name the related application.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is not clear what is meant by or encompassed by the phrase “copolymerizable material” in claims 1 and 9 because it is not clear what the material is copolymerizable with. Is the material copolymerizable with the epoxy resin or with other copolymerizable monomers? Does applicant intend to set forth free radically polymerizable materials? Does applicant intend to set forth free radically polymerizable materials also containing a functional groups reactive with the epoxy resin?

Claims 2, 3, 9 and 10 do not clearly set forth the kinds of monomers intended to be used as the copolymerizable material for the following reasons. Claims 2 and 9 recite “vinyl and (meth)acrylic monomers containing acrylamide or amide functionality or an hydroxyl group”. Claims 3 and 10 recite monomers that do not contain a vinyl group in combination with an acrylamide, amide or hydroxyl group and monomers that do not contain a (meth)acrylic group in combination with an acrylamide, amide or hydroxyl group. For example, each of N,N-dimethyl acrylamide, N-isopropyl acrylamide, and N-(n-butoxymethyl) acryamide contains an acrylamide group, but no vinyl or (meth)acrylic group. N-vinyl 2-pyrrolidone, n-vinyl caprolactam contain a vinyl group and an amine group but no acrylamide, amide or

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hydroxyl group. Acryloyl morpholine contains an acrylic group and an amine group. (Meth) acrylic acid contains an acrylic group and an acid group. Furthermore, it is not clear what kinds of “acrylated polyol” or “vinyl polyols” are intended to be included in the Markush group.

With respect to claim 8, there is no antecedent basis in claim 1 for the cellulosic oligomer recited.

It is noted that claims 9-14 duplicate the subject matter set forth in claims 2-7 since claim 2 includes the limitations of claim 1.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Sirkoch et al (4,745,003).

Example 2 discloses a compositions comprising copolymerizable materials and an epoxy resin with only free radical photoinitiators employed. Compositions disclosed by Sirkoch et al wherein the weight percents of the disclosed components are within the instantly claimed ranges anticipate the instant claims.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Thurber et al (5,426,130).

Thurber et al disclose compositions comprising copolymerizable materials and an epoxy resin with only free radical photoinitiators employed. See column 9, lines 29-38, column 10, lines 27-46, column 11, line 45, to column 12, line 16, column 13, line 21, to column 14, line 44, and column 17, lines 29-36.

Compositions disclosed by Thurber et al wherein the weight percents of the disclosed components are within the instantly claimed ranges anticipate the instant claims.

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Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Usifer et al (5,484,864). Usifer et al disclose compositions comprising a urethane methacrylate, reactive diluents such as N-vinyl caprolactam and isobornyl acrylate, and a free radical photoinitiator. Epoxy adducts or epoxy methacrylate adducts of carboxy-terminated butylene nitrile may be reacted with or formulated with the urethane methacrylate (column 4, lines 7-12). See Example 5, wherein an epoxy methacrylate is employed. Compositions disclosed by Usifer et al wherein the weight percents of the disclosed components are within the instantly claimed ranges anticipate the instant claims.

Claims 1-5 and 9-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Johnson et al (6,348,118). Johnson et al disclose adhesive compositions comprising polymerizable monomers, an epoxy resin, a photoinitiator and a pigment. The polymerizable monomers include alkylacrylate monomers and reinforcing monomers, such as N-vinyl pyrrolidone, N-vinyl caprolactam, N,N-dimethylacrylamide, and an acidic monomer, such as acrylic acid. See column 2, line 30, to column 3, line 48, and Example 1. Compositions disclosed by Johnson et al wherein the weight percents of the disclosed components are within the instantly claimed ranges anticipate the instant claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Reich et al (6,500,878) discloses improving adhesion of acrylate resins containing amine groups by adding a polyepoxide and a free radical photoinitiator. The difference is that the weight percent of polyepoxide component used in the examples is outside the instantly claimed ranges. Acrylamides, polymerizable amides and polymerizable compounds containing hydroxyl groups are not mentioned.

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Gaske (4,657,779) discloses UV curable coatings comprising a polyepoxide and an acrylate-functional compound carrying at least one reactive group, such as a hydroxyl group. The photoinitiator is capable of photoinitiating free radical polymerization and cationic polymerization.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan W Berman whose telephone number is 703 308 0040. The examiner can normally be reached on M-F 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 703 308 2462.

The fax phone numbers for the organization where this application or proceeding is assigned are 703 872 9310 for regular communications and 703 872 9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 0661.



Susan W Berman

Primary Examiner

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SB

1/28/03